

**WEST**

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L13: Entry 30 of 37

File: USPT

Dec 10, 1985

DOCUMENT-IDENTIFIER: US 4558302 A

TITLE: High speed data compression and decompression apparatus and method

## CLAIMS:

5. The compression apparatus of claim 2 in which said searching means includes hash function generation means responsive to said string code signals and to said data character signals for hashing a data character signal with a code signal to provide a hash signal, said hash signal providing a potential address signal for accessing said memory means.

6. The compression apparatus of claim 5 in which said hash function generation means comprises means for providing a predetermined number of hash signals in response to a code signal and a character signal, said predetermined number of hash signals providing potential address signals for accessing said memory means.

7. The compression apparatus of claim 6 further including means for determining if all of said predetermined number of hash signals are unsuitable as address signals for accessing said memory means.

35. The compression apparatus of claim 34 in which said searching means includes hash function generation means responsive to said string code signals and to said data character signals for hashing a data character signal with a code signal to provide a hash signal, said hash signal providing a potential address signal for accessing said memory means.

37. The compression apparatus of claim 36 further including means for determining if all of said predetermined number of hash signals are unsuitable as address signals for accessing said memory means.

109. The compression method of claim 108 in which said searching step includes the step of hashing a data character signal with a code signal to provide a hash signal, said hash signal providing a potential address signal for accessing said memory.

110. The compression method of claim 109 in which said hashing step comprises hashing a data character signal with a code signal to provide a predetermined number of hash signals, said predetermined number of hash signals providing potential address signals for accessing said memory.

111. The compression method of claim 110 further including the step of determining if all of said predetermined number of hash signals are unsuitable as address signals for accessing said memory.

130. The compression method of claim 129 in which said searching step includes hashing a data character signal with a code signal to provide a hash signal, said hash signal providing a potential address signal for accessing said memory.

131. The compression method of claim 130 in which said hashing step includes providing a predetermined number of hash signals in response to a code signal and a character signal, said predetermined number of hash signals providing potential address signals for accessing said memory.

132. The compression method of claim 131 further including the step of determining if all of said predetermined number of hash signals are unsuitable as address signals for accessing said memory.

**WEST****End of Result Set**

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L8: Entry 4 of 4

File: USPT

Feb 10, 1987

DOCUMENT-IDENTIFIER: US 4642793 A

TITLE: Many-to-one mapping hash address generator

Brief Summary Paragraph Right (3):

The advantage of using a many-to-one mapping scheme in such a system is that it enables a large but sparsely populated address range to be effectively compressed into a much smaller range, thus reducing the size of the bit maps. However, as explained in those specifications, one problem with such a scheme is that the bit maps may occasionally produce spurious outputs, indicating that a data item has been tagged when in fact it has not. The number of spurious outputs may be reduced for any particular set of data items under consideration, by suitable choice of the transformation. Thus, if a first choice of transformation results in an unacceptably high number of spurious outputs, the hash coder may be modified to produce a different transformation which gives a lower number of spurious outputs.

Detailed Description Paragraph Right (13):

The indicator R is also applied to the address input of a random access memory 37 having four locations, each of which contains a prime number in the range 3-251. The contents of the addressed location of the memory 37 supply the hashing key K for the hash coding circuit 30.

